Saketh Reddy Ranamalla

EDUCATION AND TRAINING

01/10/2021 – CURRENT Cluj Napoca, Romania

DOCTORATE IN INTEGRATIVE BIOLOGY Babes Bolyai University

- Literature review
- Synthesis, characterisation and implementation of Quality-by-design for optimisation of delivery systems
- Cell culture and in-vitro tests on primary cells and cell lines
- Statistical data analysis
- Scientific writing

Thesis Non - viral gene delivery systems for regeneration of chondrocytes in osteoarthritis and Intervertebral disc degeneration conditions

03/08/2015 – 05/06/2017 Udupi, India

MASTERS IN PHARMACY Manipal Academy Of Higher Education

- Dosage formulation development and design
- Advanced and novel drug delivery systems
- Biopharmaceutics, Pharmacokinetics and Pharmacodynamics
- Modern Pharmaceutical Analysis

Address Madhav Nagar, Manipal, Udupi, Karnataka, 576104, Udupi, India | **Field of study** Pharmaceutics |

Thesis Screening of Formulation Parameters and Influence of Physico-chemical Properties of Different Model Drugs for Development of Lipid Particulate Systems

31/07/2011 – 31/05/2015 Hyderabad, India

BACHELORS IN PHARMACY Osmania University

Address Osmania University Main Road, Amberpet, 500007, Hyderabad, India

WORK EXPERIENCE

30/04/2021 – 30/04/2024 Cluj Napoca, Romania

SCIENTIFIC RESEARCHER IULIU HAȚIEGANU UNIVERSITY OF MEDICINE AND PHARMACY

Working towards implementation of QbD and optimization of delivery systems like Hydrogels, Nanoparticles and Liposomes at CARTHAGO ITN which is an EC-funded Horizon 2020 Marie Curie Innovative Training Network (ITN) on non-viral gene therapy in regenerative medicine for osteoarthritis and intervertebral disc degeneration.

26/12/2019 – 01/04/2021 Hyderabad, India

FORMULATION SCIENTIST DR REDDY'S LABORATORIES LIMITED

Worked on developing innovative nasal formulations of a peptide drug for NDA filing. Carried out extensive research on in-situ gelling and ionic liquid systems to develop long-acting injection formulations. Gained experience in devising quality target product profiles, formulation development, interacting with cross-functional teams, dealing with CROs and CMOs, etc.

30/07/2017 – 25/12/2019 Hyderabad, India

PROCESS DEVELOPMENT SCIENTIST DR REDDY'S LABORATORIES LIMITED

Worked on QbD-based development and optimization of 17 Oral solid formulations for ANDA filing involving a wide variety of unit processes. Utilised Statistical data analysis software. Played a critical role in the Process Analytical team with expertise in online and offline characterization methods for formulations. Delivered large-scale batches using scale-up techniques and was accountable for relevant documentation using electronic lab notebooks.

03/07/2016 – 03/04/2017 Hyderabad, India

M.PHARM / PROJECT TRAINEE DR REDDY'S LABORATORIES LIMITED

As a trainee, worked on the development of innovative formulations (nasal and injectable) of an existing drug for NDA filing. Explored Liquid crystals, Lipid-based and Polymer-based Injectable formulations, and evaluated for stability and performance.

PROJECTS

01/10/2021 – CURRENT

Genetic and therapeutic material co-loaded liposomes for regeneration in OA and IVDD induced models

In Osteoarthritis (OA) and Intervertebral Disc Degeneration (IVDD) the cartilage is partially or completely degenerated and bone degradation takes place. The project aims to formulate a delivery platform consisting of cationic liposomes loaded with drug molecules and therapeutic genetic material as a regenerative therapy. The cationic liposomes would have a wide spectrum of uses and could be complexed with any genetic material for transfecting into human cells. The goal is to use these liposomes to transfect chondrocytes (both cell lines and primary chondrocytes from patients) and then check the efficiency in controlling the Osteoarthritis (OA) and Intervertebral Disc Degeneration (IVDD) in in-vitro and in-vivo models.

03/07/2016 – 03/04/2017

Screening of Formulation Parameters and Influence of Physico-chemical Properties of Different Model Drugs for Development of Lipid Particulate Systems

Lipid particulate systems were prepared for drugs of different molecular weights and different Physical and chemical properties with a set of lipids and surfactants at different concentrations in a Taguchi orthogonal array mixed-level design (design of experiment) using Minitab 17 software. The formulation trials of lipid particulate systems were prepared by solvent evaporation – emulsification method; and characterized for encapsulation efficiency, drug loading, particle size, and zeta potential using UV spectrophotometer and Zetasizer.

PUBLICATIONS

Cell uptake and intracellular trafficking of bioreducible poly (amidoamine) nanoparticles for efficient mRNA translation in chondrocytes

An Overview of the Supramolecular Systems for Gene and Drug Delivery in Tissue Regeneration

Parenteral Controlled and Prolonged Drug Delivery Systems: Therapeutic Needs and Formulation Strategies

A Research on Market Complaint Product: Detailed Investigation and a Report on Broken Film Coated Tablet inside an Intact Blister Pack

Development of Fluconazole Suppositories for the Treatment of Candida Infection of Genitourinary Tract

2024

A quality by design approach to optimise disulfide-linked hyaluronic acid hydrogels

2024

A quality by design approach to optimise the transfection efficiency of poly (amidoamine)-based nanoparticles with mRNA